
$^{12}\text{C}(^{11}\text{B}, ^{12}\text{C}), (^{11}\text{B}, ^{11}\text{B}) \quad \textcolor{blue}{1991\text{Al12}, 1992\text{Ja12}}$

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, J. E. Purcell and C. G. Sheu		NP A968, 71 (2017)	1-Jan-2017

1990Ja12,1992Ja12: $^{11}\text{B}(^{12}\text{C}, ^{11}\text{B})$ E=344 MeV; measured $\sigma(\theta)$, deduced S.

1991Al12,1991Ja12 : $^{12}\text{C}(^{11}\text{B}, ^{11}\text{B})$ E_{c.m.}=14.6-41.7 MeV; measured $\sigma(E, \theta)$; deduced model parameters and proton spectroscopic factor.

2001Ru14: $^{12}\text{C}(^{11}\text{B}, ^{11}\text{B}), (^{11}\text{B}, ^{12}\text{C})$ E=49 MeV. measured $\sigma(\theta)$; deduced deformation parameters.

2014Ha34: $^{11}\text{B}(^{12}\text{C}, ^{12}\text{C})$ E=18 MeV. Deduced $\alpha(\theta)$.

2014Li49: XUNDL dataset compiled by TUNL, 2015.

A beam of 50 MeV ^{11}B ions, from the HI-13 tandem accelerator at the Beijing CIAE, measured the $^{12}\text{C}(^{11}\text{B}, ^{12}\text{C})$ and $^{12}\text{C}(^{11}\text{B}, ^{11}\text{B})$ reactions to determine the $^{12}\text{C}_{g.s.}$ proton spectroscopic factor. The ^{11}B and ^{12}C nuclei recoiling from the target were detected at $8^\circ \leq \theta_{\text{lab}} \leq 24^\circ$ and $3^\circ \leq \theta_{\text{lab}} \leq 24^\circ$, respectively. The elastic scattering and elastic transfer events, were analyzed using the FRESCO DWBA code.

The ground state proton spectroscopic factor S=2.15 23 is obtained and compared with both theory and measured values in five other reactions.

^{12}C Levels

E(level) [†]	J ^π	S [‡]	Comments
0	0^+	2.85	S: Also See S=2.15 23 (2014Li49).
4.4×10^3	2^+	0.79	
9.64×10^3	3^-	≤ 0.55	
10.84×10^3			

[†] From (1991Al12).

[‡] From (1990Ja12,1992Ja12).